

# Comparisons of Job Characteristics

**Focus Occupation:** Computer Software Engineers, Systems Software (15-1032)

**Associated Occupation:** Network Systems and Data Communications Analysts (15-1081)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

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<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 87

**Focus Occupation:** Computer Software Engineers, Systems Software (15-1032)

**Associated Occupation:** Network Systems and Data Communications Analysts (15-1081)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Computers and Electronics	8.4	21.2	23.1	0 Current knowledge level may be sufficient
Telecommunications	3.9	17.4	8.3	<< Extensive education and/or training may be required
Customer and Personal Service	11.3	13.4	11.8	< Expanded education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 66

**Focus Occupation:** Computer Software Engineers, Systems Software (15-1032)

**Associated Occupation:** Network Systems and Data Communications Analysts (15-1081)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Systems Analysis	6.5	12.8	10.2	< A higher skill level may be required
Operations Analysis	5.0	11.5	12.0	0 Current skill level may be sufficient
Systems Evaluation	6.4	11.5	10.7	0 Current skill level may be sufficient
Troubleshooting	4.5	10.3	4.1	<< Extensive development of skills in this area may be required
Quality Control Analysis	5.9	10.0	8.7	< A higher skill level may be required
Programming	2.2	9.6	12.6	>> Skill level is likely more than sufficient
Technology Design	2.6	9.1	8.1	< A higher skill level may be required
Equipment Selection	3.3	8.5	5.2	<< Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 93			
Focus Occupation: Computer Software Engineers, Systems Software (15-1032)					
Associated Occupation: Network Systems and Data Communications Analysts (15-1081)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Deductive Reasoning	10.6	12.3	12.6	0	Current ability level may be sufficient
Information Ordering	9.9	11.6	11.4	0	Current ability level may be sufficient
Fluency of Ideas	7.6	9.7	8.8	<	Some improvement in abilities may be required
Selective Attention	8.7	9.7	9.0	0	Current ability level may be sufficient
Originality	7.6	9.4	9.3	0	Current ability level may be sufficient
Perceptual Speed	7.4	8.8	5.9	<<	Extensive improvement in abilities may be required
Speed of Closure	5.9	8.5	5.6	<<	Extensive improvement in abilities may be required
Memorization	5.6	7.3	4.8	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 90
Focus Occupation: Computer Software Engineers, Systems Software (15-1032) Associated Occupation: Network Systems and Data Communications Analysts (15-1081)		
Work Activities	Exclusivity of Activity	
Adjust computer operation system	84	
Check hardware or software to determine reliability	95	
Communicate technical information	4	
Consult with customers concerning needs	69	
Evaluate computer system user requests or requirements	81	
Follow data security procedures	77	
Follow data storage procedures	75	
Prepare technical reports or related documentation	22	
Program mainframe computer	84	
Provide technical computer training	82	
Recommend software or hardware purchases	85	
Test computer programs or systems	78	
Train workers in use of equipment	87	
Use computer networking technology	81	

Use computers to enter, access or retrieve data	3
Use knowledge of mainframe computers	78
Use project management techniques	47
Use spreadsheet software	18
Write computer software, programs, or code	84

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 84

**Focus Occupation: Computer Software Engineers, Systems Software (15-1032)**

**Associated Occupation: Network Systems and Data Communications Analysts (15-1081)**

Tools and Technologies	Exclusivity
Business function specific software	1
Computers	1
Content authoring and editing software	1
Content management software	6
Data management and query software	1
Development software	4
Electronic and communication measuring and testing instruments	14
Industry specific software	1
Information exchange software	1
Network applications software	1
Network management software	37
Networking software	21
Operating environment software	12
Security and protection software	30
Utility and device driver software	17

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.